CLIMATE CHANGE ACTION PLAN

2007 - 2012

Take action!

New Nouveau
Brunswick

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Message from the Premier

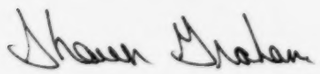
Climate change and its effects are a reality in our time and they pose a significant challenge not only to New Brunswick but also to the whole world. These impacts will continue in many forms, and inevitably change the way all New Brunswickers live and prosper in our province.

In the face of this challenge, it is clear that New Brunswickers must begin to act now. We must work collectively to reduce greenhouse gas emissions in our province; ensure the sustainability of our environment, as well as that of our communities and economy; and adapt to the long-term effects of our changing climate.

As Premier, I am truly proud to lead a government that is taking action on this issue with a comprehensive agenda: the New Brunswick Climate Change Action Plan 2007-2012. This is a plan made *in* New Brunswick, *for* New Brunswick. It sets challenging, yet achievable targets; provides flexibility for innovative solutions; and allows for a collective response involving all levels of government, as well as for engaging all New Brunswickers to do their part. It will enable our province to address climate change while striking a balance between economic development and environmental protection.

At the same time, the Climate Change Action Plan will ensure that New Brunswick does its part in regional and national efforts to reduce greenhouse gas emissions. With the assistance of federal initiatives, this plan will result in a reduction of New Brunswick's greenhouse gas emissions to 1990 levels in 2012 and position our province to realize further reductions of 10% below 1990 levels by 2020. The achievement of this reduction will serve to enhance New Brunswick's growing reputation for responsible stewardship.

As a result of the environmental and socio-economic benefits that the Climate Change Action Plan stands to deliver to New Brunswickers, our province will be an even more attractive place for people to live and earn a living, and for companies to do business. In so doing, it will help our province to be sustainable and move forward even faster on the road to self sufficiency by 2026.



Shawn Graham
Premier of New Brunswick

Message from the Minister

As Minister of Environment, I am very proud to present the New Brunswick Climate Change Action Plan 2007-2012. It is an ambitious agenda to reduce greenhouse gas emissions and address the many aspects of climate change in New Brunswick.

This made-in-New Brunswick plan has been developed with a view to securing the sustainability of our communities in a changing climate. This is a challenging goal, but it is one that New Brunswick can begin to achieve through the strategies, policy actions and sector-based initiatives of this plan.

The Climate Change Action Plan includes a series of actions to reduce as well as prevent greenhouse gas emissions, to adapt to climate-change impacts, and to use partnerships and communication to engage our communities to be instruments of change. By following through on each of these actions, and with the contribution of federal initiatives, New Brunswick can expect to achieve greenhouse gas emission reductions to 1990 levels in 2012.

The key to our province's success in implementing this plan will be the participation of all stakeholders — and when it comes to our environment, every single resident of New Brunswick is a stakeholder. Strong, ongoing partnerships will be required in order for the goals of the Climate Change Action Plan to be met, and so each and every one of us must be willing and able to work together to put our province on the path to sustainability.

I'm very pleased that this plan provides the framework necessary for many government departments and organizations, as well as individual New Brunswickers, to collaborate. Through a concerted effort, the people of New Brunswick can reduce our impact on the environment and better position our society to become less carbon-dependent in the future.

Of course, climate change and its impact on New Brunswick are challenges that won't be overcome in the short term. Meeting these challenges will be an ongoing task for our province, and so further targets and adaptive strategies will be necessary beyond 2012. The New Brunswick Climate Change Action Plan is just the first step in this undertaking, but it is a bold and decisive step that will deliver results for all New Brunswickers and future generations.

Roland Haché
Minister of Environment

Executive Summary

Climate change and its effects on the environment are a global issue. In order to reduce greenhouse gas emissions and improve our ability to adapt to and cope with unavoidable environmental changes, collective actions are necessary. The Province of New Brunswick is committed to doing its part in efforts to reduce greenhouse gas emissions.

The New Brunswick Climate Change Action Plan is an important step to address the many broad and interrelated aspects of climate change in this province. It is an ambitious plan that outlines our collective vision for reducing provincial greenhouse gas (GHG) emissions and managing our adaptation to climate change impacts through a series of targets and policy actions as well as engagement of stakeholders and the public. In these ways, this plan charts our path to sustainability in a changing climate.

NEW BRUNSWICK'S CLIMATE CHANGE ACTION PLAN EMISSION REDUCTION TARGET

The New Brunswick Climate Change Action Plan emission reductions are expressed in megatonnes (millions of tonnes) of CO_2 equivalents. New Brunswick-led initiatives will result in greenhouse gas emission reductions of 5.5 Mt annually in 2012.

New Brunswick will continue to contribute to regional and national initiatives to address climate change in the short and the long term. Future Climate Change Action Plan targets and adaptive strategies will be required beyond the 2007-2012 period. The following initiatives are the focus of the 2007-2012 action plan. By adopting actions now, market shifts will occur which beyond 2012 will result in ever increasing emission reductions. Through these actions and the continued introduction of emerging technologies, significantly greater reductions will be realized, allowing New Brunswick to achieve a further 10% reduction by 2020.

ACTIONS TO REDUCE OR AVOID GHG EMISSIONS

The New Brunswick Climate Change Action Plan focuses on actions that reduce our current GHG emissions and adopts measures for managing future emissions. These include:

- Providing practical solutions to help New Brunswickers use energy more efficiently, make better energy choices, manage energy expenses and lessen the impact of energy use on the environment;
- Significantly increasing the percentage of GHG-free electricity generation;
- Adopting a public transportation strategy that significantly reduces GHG emissions from this sector;
- Building upon waste-reduction and waste-diversion activities, such as by improving recycling and composting systems, and reducing landfill gas emissions;

Energy Efficient Lighting

Lamèque

Woodstock

- Making government operations more energy-efficient and environmentally sustainable;
- Using project assessment reviews and other environmental approval processes to minimize emissions;
- Undertaking environmentally focused research and development that will assist New Brunswick industries in the development of climate-friendly technologies and approaches; and
- Regulating ozone-depleting replacement substances that also pose significant GHG risks.

ACTIONS TO ADAPT TO CLIMATE CHANGE IMPACTS

New Brunswick must not only reduce greenhouse gas emissions, but also be prepared for the effects of climate change. Climate change has already had impacts on New Brunswick communities and further changes are already unavoidable, even if all nations were to drastically reduce greenhouse gas emissions immediately. Our adaptation response is a combination of technological innovation; educational, incentive-based and regulatory actions; and achievable targets.

Our adaptation response includes:

- Undertaking a provincial risk assessment to identify both the public sector and the private sector development risks and adaptation needs, with particular focus on coastal areas and inland waters of the province; and
- Climate-proofing our development decisions at all levels of government through the use of an enhanced provincial planning policy and related strategies, with special emphasis on coastal regions.

PARTNERSHIPS AND COMMUNICATION

Managing our environment in a sustainable manner, reducing GHG emissions and adapting to climate change impacts are shared responsibilities that must be met through strengthened partnerships, particularly with communities. Through partnerships and actions that set realistic targets and provide flexibility for innovation, we will ensure environmental sustainability as well as economic and community success.

Actions in this area include:

- Providing opportunities for communities to become partners in efforts to mitigate and adapt to climate change by sharing ideas, experiences and practices;
- Working with communities to construct new, and adapt existing, infrastructure in such a manner that it minimizes greenhouse gas emissions and is designed to function in a changing climate;
- Working with the federal government, other agencies, industry, environmental organizations and communities to better understand the climatic changes that are taking place and provide outreach and educational opportunities; and
- Undertaking initiatives to encourage people to make choices that both reduce greenhouse gas emissions and allow them to adapt to the challenges of a changing environment.

Principal Areas for Action

Due to the cross-cutting scope of the targets outlined in the Climate Change Action Plan a collective response involving provincial, federal and municipal governments, as well as public and private interests, is required. The plan includes actions in the following areas.

Communities: The Province will provide opportunities for communities to become partners in efforts to mitigate and adapt to climate change.

Energy Management: The Province will help foster the availability of cleaner energy options, and implement strategies, initiatives and programs to promote energy efficiency.

Industry: The federal government has indicated its intent to take a leadership role in regulating greenhouse gas emissions from industrial facilities. In addition, the Province will work with the federal government to address industrial facilities and focus on emission reductions from operations through energy efficiency and fuel-switching actions.

Transportation: As transportation accounts for 25% of New Brunswick's greenhouse gas emissions, the Province will work to improve transportation options and help consumers make informed decisions about vehicles, fuels and transportation in general.

Buildings: The Province will show leadership in the management of its own buildings. Building efficiency standards will be implemented with a view to reducing the carbon footprint of Government. The Province will also help other building owners take advantage of efficiency opportunities, including efficiency programs and promotion of appropriate technology.

Waste Reduction and Diversion: The Province will promote improved waste management options, including better recycling and composting systems, and the reduction of landfill gas emissions. It will also work on reducing waste at the source, by, for example, advocating recycled content in products and packaging, and mandating Extended Producer Responsibility for products such as paint, oil and electronic components.

Natural Resource Management - Sequestration: The Province will enhance the ability of the natural features of our environment to remove carbon from the air by supporting improved forest management and agricultural practices. Green spaces will be better managed and reforestation will be promoted.

Partnerships and Communication: The Province will act to enhance partnerships at all levels and develop awareness and educational programs that support the Climate Change Action Plan by individual, group and community actions.

Implementation and Accountability: As accountability through measuring and reporting processes is essential, the Province will track and report on greenhouse gas emissions, trends and progress regarding the implementation of all climate change initiatives identified in this plan.

Department of Natural Resources

New Brunswick Forests

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1. The Climate Change Picture

1.1 WHAT IS CLIMATE CHANGE

Climate change refers to changes in climate, or "average weather patterns," that occur on timescales of decades to centuries. The Intergovernmental Panel on Climate Change (IPCC) Third Assessment Report 2001 (ref. IPCC Third Assessment Report - Climate Change 2001) concluded that the consensus view of thousands of scientists around the world is that climate change is occurring and that global warming is the result of increases of the atmospheric concentrations of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O) and other heat-trapping gases. Excessive amounts of these gases in the atmosphere interfere with the globe's natural warming and cooling cycles. The 2007 IPCC Fourth Assessment Summary for Policymakers Report (ref. Climate Change 2007: The Physical Science Basis, Summary for Policymakers, IPPC 2007) builds upon the 2001 report findings and contains the strongest conclusions to date confirming the links between human-related greenhouse gas emissions and climate change.

The worldwide consumption of fossil fuels produces vast amounts of CO_2, which is the main contributor to climate change. The increased production of greenhouse gases has climatic effects that are being observed worldwide. Unless the growing emission trends can be reversed, there will be increased harmful effects on all aspects of the environment, economy and society.

If no action is taken to prevent it from happening, greenhouse gases are forecast to reach twice their pre-industrial (i.e., pre-1850) levels by 2035. This will cause global average temperature increases toward the higher end of the 1.4 to 5.8 degrees Celsius range relative to 1990 by the year 2100. There is also a 50% chance that the global average temperature rise will exceed 5°C from preindustrial levels, a change unprecedented since the end of the last ice age and an increase that will have major effects on many of the plant and animal species we rely on. Such changes would not only transform the ecology and physical geography of our planet, but also determine how and where we could live.

Bissfield

1.2 ECONOMIC PERSPECTIVE ON CLIMATE CHANGE

The Stern Report, the most comprehensive public review ever carried out on the economics of climate change, was published on Oct. 30, 2006 (ref. Stern Review on the Economics of Climate Change, January 2007). The report makes it clear that climate change is a serious global threat, and that the costs of reducing emissions and proactively adapting to a changing climate are far less than the future risks and damage of global warming.

Caissie Cape

The Stern Report estimates that the dangers of unabated climate change could be equivalent to losing at least 5%, and as much as 20%, of global GDP each year. Early action now to reduce greenhouse gas emissions to avoid the worst impacts of climate change could limit the reduction to about 1% of global GDP each year.

Pointe-du-Chêne

Pointe-du-Chêne

Climate change is not only an environmental issue; it is an economic and social issue as well. New Brunswick has experienced significant economic losses due to the impacts of extreme weather events in recent years. For example, two intense storm surge events occurred in January and October of 2000 along the southeastern coast of New Brunswick, causing more than $4.6 million in damages (October 2000 - $2.6 million, January 2000 - $2 million). During the winter of 2006-2007, normally frozen logging roads were impassable because warm temperatures had necessitated the closure of logging operations. Such events are expected to occur more often as the sea level continues to rise and global temperatures increase.

Although reducing greenhouse gases entails actions and investments now, for future economic and social benefit, the "do nothing" scenario carries the potential for far greater impacts in the medium and long terms. Government, industry and individuals all have a moral obligation to set priorities and make choices that are environmentally responsible. To protect and grow the economy of New Brunswick and to make progress towards self-sufficiency for our province, our plan must include actions to reduce greenhouse gases and the adoption of adaptation strategies to manage the impacts of climate change.

1.3 KYOTO AND CANADA

In 1997, an agreement was developed at the United Nations Framework Convention on Climate Change meeting in Kyoto, Japan, that set an overall framework for international efforts to tackle the challenges posed by climate change: the Kyoto Protocol. This agreement officially came into force on Feb. 16, 2005, and requires Canada to reduce its greenhouse gas emissions to 6% below 1990 levels over the period from 2008 through 2012.

The federal government has introduced new legislation to address air pollutants and climate change issues: a Canada *Clean Air Act*. This is the federal government's proposed approach to addressing the reduction of greenhouse gasses that contribute to climate change and will include industrial sources.

New Brunswick is committed to doing its part to contribute to national efforts to reduce greenhouse gases. To this end, a clear protocol for New Brunswick Kyoto credits will be developed to ensure that all credits from Crown corporations, lands and government initiatives are the property of the people of New Brunswick. The Province will work with federal agencies to ensure recognition of these credits is appropriately considered in any future carbon-credit program.

1.4 NEW ENGLAND GOVERNORS AND EASTERN CANADIAN PREMIERS (NEG/ECP)

In 2001, the Conference of the New England Governors and the Eastern Canadian Premiers (NEG/ECP) adopted a Climate Change Action Plan for the region. The plan calls for the stabilization of greenhouse gas emissions at 1990 levels by 2010, and for an additional 10% reduction by 2020.

As a member of the NEG/ECP, New Brunswick's contribution to the regional targets set by the NEG/ECP in its Climate Change Action Plan will be 5.5 Mt annually in 2012. This contribution will be accomplished through the reduction initiatives identified in the New Brunswick Climate Change Action Plan.

1.5 CLIMATE CHANGE IMPACTS ON NEW BRUNSWICK

Climate change is expected to have a profound effect on New Brunswick in the future. Climate models predict average global temperature increases toward the higher end of the 1.4 to 5.8 degrees Celsius range relative to 1990 by the year 2100. Recent global temperature increases are consistent with New Brunswick observations.

1.5.1 - New Brunswick Observations

- The frequency of winter thaws and intense precipitation events has increased.
- The snow pack in the northern part of New Brunswick has decreased by 25% over the last 30 years, while the southern part of the province has shown a decrease of about 50%.
- The sea level has risen by about 30 centimetres in New Brunswick in the past 100 years. By 2100, a further rise of 50-60 cm is forecast.

1.5.2 - Expected Future Changes

- Warmer weather in winter and summer, and an increase in total precipitation, falling in more intense events.
- More frequent winter thaws, and an increased risk of ice-jam flooding.
- An increase in river runoff.
- Decrease in seasonal water availability, due to higher temperatures and evaporation rates.
- More significant coastal erosion and flooding.

Among the most significant impacts will be rising coastal water levels and increased storm surges, which will accelerate coastal erosion and loss of infrastructure, wetlands and other coastal and man-made features. Impacts are anticipated on water supplies and water quality. It is expected that tree species will change and the frequency of forest fires will increase. Over time, agriculture, fisheries and aquaculture will endure impacts, such as new diseases and pests and the arrival of new species with different economic values and environmental impacts. More frequent unseasonable and severe weather events will occur.

Campbellton

Fredericton

2. New Brunswick's Greenhouse Gas Emissions

Coleson Cove Generating Station

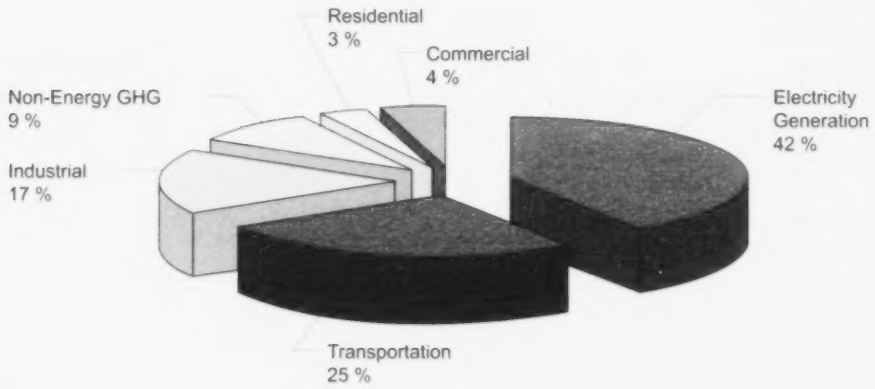
2.1 NEW BRUNSWICK SOURCES OF GREENHOUSE GAS EMISSIONS

New Brunswick emits about 3% of the emissions released in Canada and about 6% of the greenhouse gas emissions released in the NEG/ECP region.

In the graph below, six sectors have been identified with their respective proportions of greenhouse gas emissions.

Hampton

NB 2004 Greenhouse Gas Emissions by Sector



Source: Statistics Canada and NBDOE, October 2006

New Brunswick has an energy-intensive economy with more than 80% of provincial greenhouse gas emissions coming from the electricity generation, transportation and industrial sectors. Adopting technologies that are more efficient, providing alternatives to the burning of fossil fuels, and offering opportunities to sequester and store carbon will greatly help to reduce emissions, and also provide opportunities for economic development.

2.2 ESTIMATING OUR PROJECTED REDUCTIONS IN GREENHOUSE GAS EMISSIONS

New Brunswick's greenhouse gas emissions were reported by Environment Canada at 16.1 Mt CO_2 equivalents (eq.) in 1990 and at 22.0 Mt CO_2 eq. in 2004: an increase of 5.9 Mt CO_2 eq., or 36.6%. Between 1990 and 2004, there was a significant growth in the heavy-duty diesel vehicle transportation sector and in the electricity and industrial sectors, a significant portion of which can be attributed to export markets.

Between 2001 and 2004, New Brunswick showed a decrease of 1.1 Mt, or 4.8%. New Brunswick is one of only two jurisdictions in Canada that has shown a decrease in emissions for this time period.

Planned emission reductions are presented, by sector, in mega-tonnes of CO_2 eq., as shown in the table below. The table presents the projected reductions in greenhouse gas emissions outlined in this action plan.

Projected Reductions of GHGs in 2012

Potential for GHG Reductions and Avoidance	Estimated Reductions CO_2 eq.
Energy Efficiency and Renewable Energy	2.2 Mt
Transportation	1.2 Mt
Waste Management	1.2 Mt
Industrial Sources – (further reductions possible in partnership with the federal government)	0.7 Mt
Other - Government Leading by Example - Partnerships and Communications	0.2 Mt
Total:	5.5 Mt

Westmorland-Albert Solid Waste Corporation

Energy Efficient Lighting

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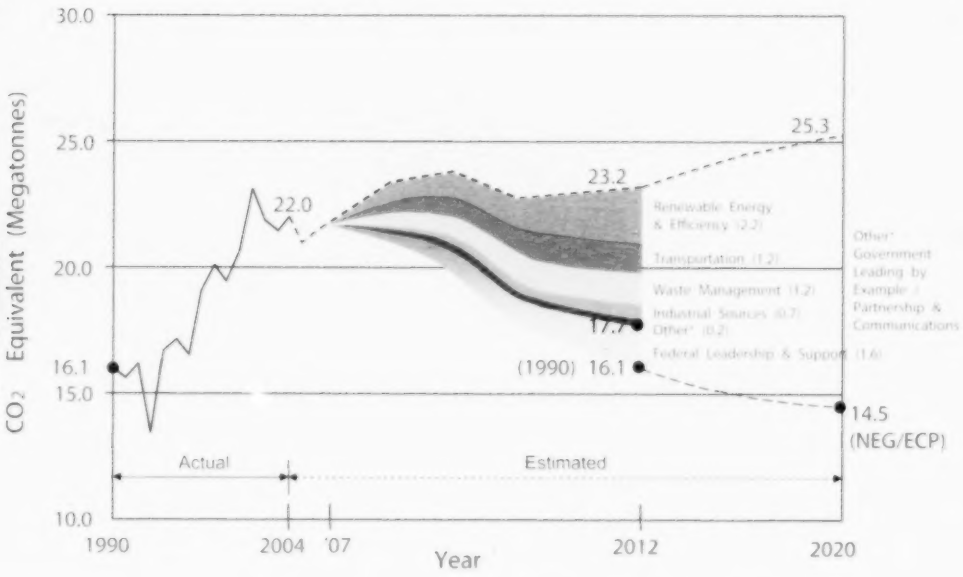
Total:	5.5 Mt

Fredericton

Department of Natural Resources

The following graph illustrates the projected greenhouse gas reductions for each of the New Brunswick-led action categories outlined in this Climate Change Action Plan. These combined actions will enable the Province to realize a reduction of total greenhouse gas emissions of 5.5 Mt annually in 2012. It is anticipated that New Brunswick-led actions will be strengthened through the leadership and support from the federal Government, particularly in the area of greenhouse gas regulation of large industrial facilities, as illustrated below.

Projected Greenhouse Gas Emissions
Scenarios in New Brunswick



References: National Inventory Report: 1990-2004 NB Departments of Energy & Environment

Fredericton

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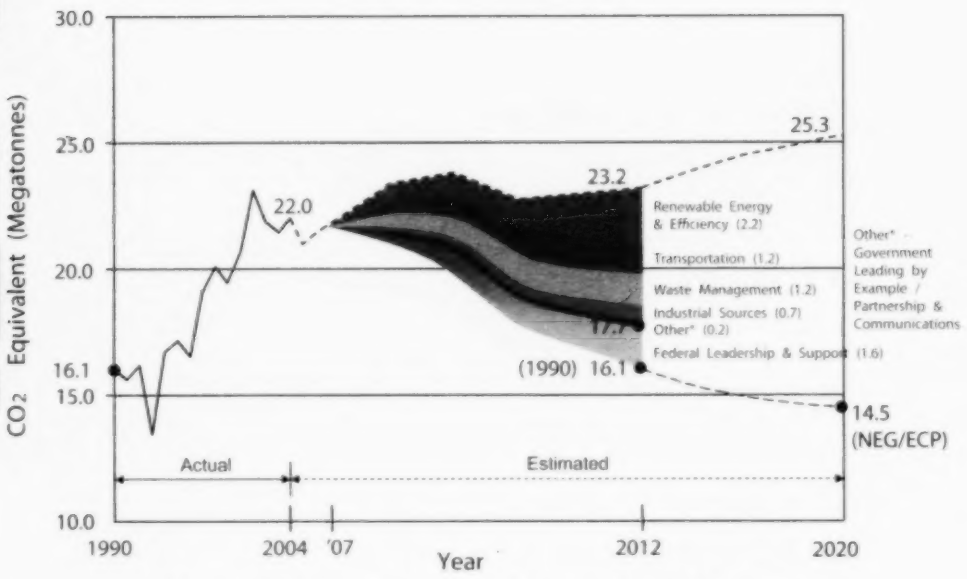


References - National Inventory Report: 1990-2004/NB Departments of Energy & Environment

3. Actions to Reduce or Avoid Greenhouse Gases 2007-2012

This section of the Climate Change Action Plan outlines measures that are necessary to reduce our current, and or avoid future, greenhouse gas emissions. Cleaner energy options are being made more widely available, and programs are being implemented to help ensure that all types of energy will be used more efficiently.

Provincial actions to reduce or avoid greenhouse gas emissions for the period 2007-2012 will include:

- An increased proportion of greenhouse gas-free energy.
- Improvements in the management of energy use.
- Fuel switching.
- Enhanced waste management.
- Enhancement of the ozone-depleting substances regulation.

3.1 ENERGY EFFICIENCY

Energy efficiency is the provision of a consistent amount of power and heat with a reduced amount of electricity or fuel, owing to the application of new technologies, measures and practices. Using energy more efficiently is a key factor in achieving greenhouse gas emission reductions and makes our energy system less expensive to operate.

Buildings use a significant quantity of energy for lighting, appliances, water and space heating and cooling and so they are excellent candidates for the employment of efficiency measures. The Province is taking action to improve the efficiency of new construction and existing buildings.

New Brunswick provides the most innovative and comprehensive package of home energy efficiency programs in Canada. These programs are designed to support homeowners and small apartment building owners. Through education, promotion and incentive programs, Efficiency NB assists energy consumers in all sectors in improving energy efficiency, thereby reducing their energy use.

Already a leader in Canada, Efficiency NB will also be working with nonresidential property owners to help them make their buildings and businesses as energy-efficient as possible. This will be done through programs, market transformation strategies and access to professional advice. Investing in energy efficiency is an essential component of a self-sufficient New Brunswick. An energy efficiency study carried out in New Brunswick's industrial sector shows that with robust programs and initiatives, energy use could be realistically reduced by 5% to 13%. Efficiency NB will work with New Brunswick companies to improve their productivity and competitiveness by assisting them to maximize the energy efficiency opportunities outlined in the study.

Falls Brook Centre

The Province will:

Insulation

- Expand energy efficiency programs and initiatives for New Brunswick homes, businesses and industries;
- Adopt an energy performance standard that goes beyond the federal Canadian model building energy code, for both new and renovated buildings in the residential and commercial markets, to be implemented in increments beginning in 2009;
- Introduce energy efficiency standards to Energy Star levels, for appliances and equipment sold in the Province in a managed and phased approach consistent with the availability of these products in the marketplace; and
- Adopt an off-electricity heating strategy for residential and commercial buildings that will include the use of low-GHG technologies and eliminate the installation of new electric baseboards whenever alternatives are available.

Falls Brook Centre

3.2 RENEWABLE ENERGY

Renewable energy is defined as energy derived from resources that are regenerative or that, for all practical purposes, cannot be depleted. Sources of renewable energy include wind, hydroelectric, biomass, tidal, geothermal and solar energy. Since the sources are renewable, they do not deplete the Earth's resources. However, no energy resource is without impacts, and the environmental costs and benefits vary from resource to resource.

Through the Electricity from *Renewable Resources Regulation* of the *Electricity Act*, a standard for electricity from renewable resources has been adopted. The standard requires that 10% of electricity sales must come from new renewable sources by 2016. This will add to our existing hydro- and biomass-based generation to bring renewable-sourced electricity up to 33%. In response to the standard, NB Power announced an expression of interest to provide 400 megawatts (MW) of renewable electricity generation. NB Power has already contracted for 96 MW by 2008.

New Brunswick will need to continue investment in tidal and wind power research and commercialization opportunities and examine the economic opportunities from other green power sources, such as small-scale hydroelectricity generation. Presently, a study is being undertaken in the Bay of Fundy to determine the feasibility of generating electricity from tidal flow. The early results are promising and additional low-GHG electricity generation can be expected in the future. In order to promote the renewable electricity sector, the Province will seek to develop, with its regional partners, market rules for the establishment of clean-energy projects.

Fuel switching is a term used when one type of fuel is replaced by another type of fuel. A number of opportunities exist to achieve greenhouse gas reductions through fuel switching. Biomass provides such an opportunity. Conservative estimates indicate that fuel switching from traditional hydrocarbon fuels to biomass fuel may provide about 0.72 Mt of greenhouse gas reductions. It is the Province's intention to provide the forest industry the opportunity to access Crown forest biomass, in order to help reduce high energy costs as well as greenhouse gas emissions and to support and maintain this important industry.

The Province will:

- Undertake a study of the feasibility of constructing new small-scale hydroelectricity generation projects;
- Assess and foster development of a range of renewable energy generation opportunities, such as biomass, solar, wind and tidal; and
- Implement a forest biomass policy.

3.3 TRANSPORTATION

With transportation accounting for 25% of New Brunswick's greenhouse gas emissions, the Province will work to improve transportation options and help consumers make informed decisions about vehicles, fuels and transportation in general.

3.3.1 – Public Transit

In partnership with municipalities and the federal government, New Brunswick is now making improvements in public transit efficiency and greenhouse gas reductions through bus replacement, rehabilitation and fleet expansion. Future opportunities exist by expanding transit routes and updating current programs.

Partnership opportunities in the transportation sector exist in areas such as support to businesses that encourage public transit ridership by their employees. Such support could be in the form of incentives, development of urban-rural transit linkages and multi-level partnerships for continued investment in public transit systems, and encouragement of increased ridership.

Further opportunities exist for integration of rural and urban public transit needs. These opportunities might include networks of commuter parking areas, walking/cycling trails and carpooling. In order to reduce emissions strategically in the transportation sector and take advantage of economic opportunities, a public transportation strategy is necessary.

The Province will:

- Develop, in partnership with communities and stakeholders, a public transportation strategy to ensure that New Brunswickers have convenient alternatives to their private vehicles and that their needs for mobility are met.

Fredericton

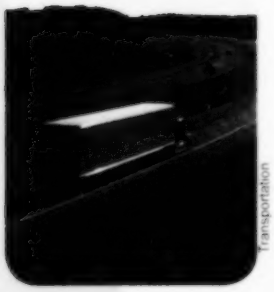
Norton

3.3.2 – Fuels for Transportation

When petroleum-based products are burned, significant amounts of greenhouse gases are produced. Therefore, it is necessary to improve the efficiency of all vehicles to reduce the quantity of fuel being used, and to make lifestyle changes. Significant opportunities to reduce transportation emissions exist at the provincial and municipal levels, within the trucking industry, as well as our collective action as individuals.

Idling vehicles waste an enormous quantity of fuel while producing no gain in transportation. Research has demonstrated that after 30 seconds of idling, it is less costly to turn off the engine than to let it run. The government will build upon

both a no-idle policy for school buses, instituted by the Department of Education, and other initiatives for the government fleet.



Transportation

Vehicles are more fuel-efficient when they are travelling at lower speeds. Therefore, the Province will encourage the driving public, through education programs, to lower speeds. The trucking industry can also benefit from reduced speeds in terms of lower emissions and increased fuel efficiency. Technology options, such as efficient tires, engine efficiency bolt-on options and aerodynamic body panels on highway vehicles, can also contribute to fuel efficiency.

New Brunswick has made and will continue to make significant progress in the deployment of Weigh in Motion (WIM) and road weather information systems technology in support of transportation network improvements, as part of a new Intelligent Transportation Strategy,. Three WIM technology stations have been installed at strategic locations to improve the efficient flow of transport truck traffic and thereby reduce transportation emissions. During the next four years, one new installation per year is scheduled to become operational.

Biofuels from Agriculture - Canola

As part of a new Intelligent Transportation Strategy, the Province will, in partnership with the New Brunswick trucking sector and other public/private partners, encourage truck drivers to turn off their idling trucks while taking steps to allow the continued use of the amenities of their vehicles. Stationary idle reduction projects could involve switching heavy-duty diesel trucks to electricity to reduce greenhouse gas emissions as identified by the Canadian Trucking Alliance. This could be facilitated through the use of truck stop electrification systems at major collection locations and other technologies.

Low emission vehicles (LEV) will help reduce the emissions that contribute to climate change. In 2004, California introduced new GHG emission standards for light-duty vehicles. This standard requires automobile manufacturers to market vehicles that meet an annually-set GHG emissions limit. The standard which takes effect in 2009, is expected to decrease emissions between 25% to 30% for new vehicles sold. Many jurisdictions in the United States have adopted or intend to adopt the California LEV emission standards including the majority of the NEG/ECP jurisdictions. In Canada, the Provinces of Quebec and Nova Scotia, as part of the NEG/ECP, and British Columbia has endorsed the adoption of California LEV emission standards. New Brunswick supports a coordinated effort to implementing LEV standards.

As a means of initiating early action to achieve emission reductions, options for a financial assistance program to encourage consumers to choose more efficient vehicles, will also be part of our response.

The Province will also direct efforts to reduce GHG emissions from late model and older vehicles. Mechanisms will be developed to ensure that New Brunswick vehicles are operating at the emissions standards applicable to their model and year.

Measures to reduce fuel consumption must also include switching to low emission or clean fuels. The Canadian Council of Ministers of the Environment has identified the need for standards associated with cleaner gasoline to support emissions hardware. Automakers have long advocated "a systems approach"

with fuels to support advanced emissions technology. As emissions-control technologies become more sophisticated, the need for cleaner gasoline becomes more important. The use of biofuels as additives has the advantage of reducing the quantity of total fossil fuel burned and reducing greenhouse gas emissions. One method to achieve the goal of reducing greenhouse gas emissions is to have a larger percentage of existing and future vehicles use alternative and renewable fuels.

The Province will:

- Develop a new Intelligent Transportation Strategy to position New Brunswick as a national leader in transportation technology and also to help reduce emissions from the transportation sector;
- Work with the trucking industry to examine opportunities for engine efficiency and aerodynamics technologies in order to reduce pollutants and greenhouse gases;
- Partner with jurisdictions in the NEG/ECP region in implementing standards for vehicles sold in New Brunswick that are stringent with respect to energy consumption and consistent with California's low emissions vehicle (LEV) standards;
- Offer incentives for New Brunswickers to switch to alternative fuel and fuel-efficient vehicles;
- Require that older vehicles have an emission test and establish minimum emission standards as a requirement for vehicle registration;
- Partner in co-operation with the trucking industry and Quebec to implement a strategy of limiting truck speeds to 105 km/h;
- Encourage, through public awareness and education, the importance of anti-idling as a means of protecting public health and the environment;
- Work with municipal associations and communities to develop a model anti-idling policy for use by local jurisdictions;
- Encourage research and development of biofuels produced from either agricultural products such as corn, barley, or wheat, or from wood waste, which will help establish availability for this alternate fuel in the market; and
- In co-operation with the federal government, support the use of biofuels with a view to requiring a minimum average of 5% ethanol in gasoline and 5% biodiesel in diesel fuel sold for vehicle or heating fuel use in New Brunswick.

Composting - Fundy Solid Waste Commission

3.4 WASTE MANAGEMENT

New Brunswick has an action plan to reduce and divert waste in order to address broad waste-management issues. The Province will build upon this action plan, which promotes improved waste-management options, including better recycling and composting systems, and reducing landfill gas emissions. It will also work at reducing waste at the source, by, for example, advocating mandatory recycled content in products and their packaging, and mandating Extended Producer Responsibility for products such as waste paint, used oil and electronics.

Westmorland-Albert Solid Waste Corporation

In the waste-management sector, there are two areas identified that could greatly improve the reduction of greenhouse gas emissions: enhanced composting operations and methane gas collection.

Recycling

Flaring landfill gases
Fredericton Solid Waste Commission

The Province has 12 regional solid waste commissions. Already four commissions, covering half the province's population, have addressed the collection and composting of organic waste. The provincial action plan for waste reduction and diversion addresses the development and implementation of region-wide composting programs to manage organic waste. As the decomposition of organics in sanitary landfill cells occurs, it produces methane, which is released into the atmosphere. Methane gas has a global-warming potential 21 times greater than CO_2. However, properly managed composting significantly reduces greenhouse gases and results in net carbon storage associated with the application of compost to soils.

There are six regional landfills in the province with one having implemented a landfill gas-management system. In 2006, Fredericton began collecting and flaring gas. The Province will continue to work with solid waste management commissions across New Brunswick to identify options for the management of landfill gas from existing and future landfill cells.

The production of waste in our daily life is inevitable, but we must consistently work to reduce the quantity produced, to reuse products whenever possible, and to recycle when the goods are no longer needed. This helps to alleviate the pressure on New Brunswick's landfill sites, reduces and reuses resources at a lower environmental cost and creates fewer greenhouse gases.

The Province will:

- Increase waste diversion and recycling, including the composting of waste; and
- Encourage projects that capture methane gases from landfills and produce energy, where it is feasible to do so.

3.4.1 - Ozone-Depleting Replacement Substances

Ozone-depleting substances have been regulated in New Brunswick since 1992. Their management has benefited the environment by helping to restore the ozone layer. Replacement substances, such as hydrofluorocarbons, do not contain chlorine or bromine compounds, have no ozone-depletion potential and have been widely used as replacement compounds in air-conditioning applications and in fire-suppression systems. However, these substances are potent greenhouse gases, with a typical global-warming potential 1,300 times that of CO_2.

The Province will:

- Review the *Ozone Depleting Substances Regulation* under the *Clean Air Act* to limit the release of replacement substances into the environment.

3.5 INDUSTRIAL SOURCES

The federal government has indicated its intention to take a leadership role to regulate greenhouse gas emissions from large manufacturing and industrial facilities. The advantage in having federal leadership on emissions from large emitters and national regulation of this sector is that these will allow for any

standard or reduction target to be applied Canada-wide, resulting in fair treatment of industry sectors from a national perspective. The Province will work with New Brunswick industries and the federal government to help ensure there is fairness and consistency in implementing emission standards for industrial sources among industry sectors and among provinces and territories.

To foster growth in a responsible manner, the Province will examine options for applying the principle of best-available-technology standards in project assessments and other environmental approvals. The Province will also focus on emission reductions from smaller operations through less carbon-intensive energy options.

The Province recognizes that implementation of technology improvements relies upon the establishment of the appropriate conditions to support research and development of environmental innovations. The New Brunswick Innovation Foundation is a catalyst for innovation and change in the province. It makes targeted investments in research and development and is focused on stimulating innovation. Technology improvements will assist industry in making emission reductions. The Province will use the New Brunswick Innovation Foundation as a means to support research and development of carbon management and less carbon-intensive technologies.

Greenhouse gas offset credits are earned from projects that result in lower greenhouse gas emissions than established levels, and that are undertaken in sectors not covered by the federal government's greenhouse gas emission regulations. The Province will work toward the development of actions that will ensure it retains the ownership of offset credits from Crown corporations, lands and government initiatives.

The Province can create an economic climate that stimulates growth with the application of New Brunswick-based greenhouse gas offset credits through investments by the private sector in the province. With activities such as forest management practices, waste-diversion and composting actions, the development of new wind-energy capacity, and the capture and use of methane from landfills, New Brunswick can become less carbon-intensive. Furthermore, industrial facilities, both existing and future, will benefit from the exploration of cost-effective partnerships with communities and organizations. These partnerships will result in further emission reductions, to be used to minimize the facilities' overall greenhouse gas emissions.

The Province will:

- Use project assessment reviews and other environmental approval processes to minimize project emissions;
- Designate funding, through the New Brunswick Innovation Foundation, for environmentally focused research and development;
- Develop clear protocols to ensure that all carbon credits from Crown corporations, lands and government initiatives are the property of the people of New Brunswick; and
- Work with the federal government to ensure that forest management carbon offset credit opportunities in New Brunswick are fully recognized.

Planting Trees

Technology

3.5.1 – Electricity Generation

Point Lepreau Nuclear Station

For New Brunswick, the production of electricity contributed the largest portion of emissions in 2004, with 9 Mt, or 42%, of our greenhouse gases. This action plan addresses both existing and potential emissions and begins the groundwork for a vision of a less carbon-intensive and sustainable future for New Brunswick beyond 2012.

Through the application of advanced technologies and domestic reductions, NB Power will participate in a national framework that would achieve an absolute reduction from the Canadian thermal electricity sector of 25% from 2003 levels by 2020. This achievement will be ratcheted down continuously until 2050, at which time the thermal electricity sector anticipates a 65% reduction in emissions.

Natural Gas Development - Sussex

In order to manage the affordability and reliability of Canada's electricity supply, the plan would be achieved primarily through the retirement and clean refurbishment of existing thermal plants, and/or through other compliance mechanisms at the end of the economic life of these facilities. NB Power anticipates it could realize a reduction of up to 2 Mt below 2003 greenhouse gas levels by 2020, through the provincewide application of demand-side management measures in the residential, commercial and industrial sectors, as well as the implementation of the Province's Renewable Portfolio Standard.

NB Power has also committed to the refurbishment and life extension of the Point Lepreau nuclear station, which will result in incremental, real and quantifiable emission reductions extending for 25 years. The refurbishment of the Point Lepreau station will bring about overall lower fossil-fuel generation, resulting in about 0.6 Mt per year of CO_2 emission reduction by 2010.

The Province will:

- Realize efficiencies as a result of the refurbishment of the Point Lepreau nuclear station.

3.6 FUTURE ENERGY OPPORTUNITIES

In conjunction with energy efficiency and renewable electricity initiatives, we must begin the planning necessary to further reduce the carbon footprint. Beginning to reduce our carbon footprint now is important in order to position New Brunswick for self-sufficiency by 2026. Acting upon and exploring future energy opportunities will contribute to providing New Brunswick with the flexibility to make future choices in growing our communities and economy. Many opportunities exist to continue developing an economically sound, diverse and sustainable electricity sector.

The Province will:

- Undertake a study to examine the feasibility of a second nuclear reactor at Point Lepreau;
- Explore hydrogen and fuel-cell opportunities;
- Support exploration of natural gas resources in southeastern New Brunswick;
- Examine the feasibility of bringing natural gas to the northern part of the province; and
- Assess the use of clean coal and carbon-sequestration opportunities.

4. Government Leading by Example

The Province will use the leadership position of the public sector to demonstrate best environmental practices and encourage environmentally sustainable practices within government and beyond. Through the greening-of-government operations, provincial departments and agencies will develop initiatives to make government operations more energy-efficient and environmentally sustainable. The objective for the Province will be to reduce greenhouse gas emissions from public operations by 25% by 2012, as measured from 2001 levels. To this end, the Province will focus on five key areas in government operations:

- Procurement;
- Transportation;
- Buildings;
- Partnerships; and
- Energy Management.

4.1 PROCUREMENT

An opportunity exists to increase the use of Environmentally Preferable Products (EPPs) in government operations. EPPs are products that include materials with recycled content. These minimize generation of toxic materials and are otherwise designed to lessen the environmental impact from manufacture to disposal. The Province will increase the energy efficiency of electronic equipment it purchases, as well as increase the recyclability and recycled content of other supplies.

The Province will:

- Incorporate environmental guidelines in procurement contracts and tenders that will help create a market for EPPs; and
- Meet an Energy Star level for rated products in contracts or purchase orders for office equipment, building equipment and lighting systems.

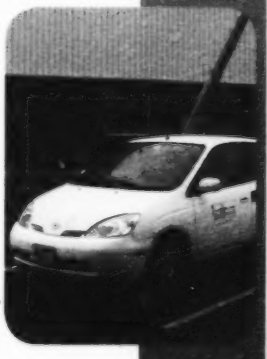
Upper River Valley Hospital - Waterville

4.2 TRANSPORTATION

The Province's climate change response for the transportation sector includes a mix of technological innovation; incentive-based, alternate fuels research; and transit actions. The Province has established green-purchase requirements for the government fleet of vehicles.

The Province will:

- Ensure that the government fleet becomes a model user of low-emission vehicles;
- Expand the application of idle-free policies and zones for government operations; and
- Provide leadership in the introduction and use of biofuels.



Hybrid Vehicle

4.3 BUILDINGS

Department of Natural Resources

The Province has undertaken the construction of new, green provincial buildings and is retrofitting numerous existing public buildings to improve energy efficiency and water conservation.

The Province will show leadership in the management and construction of its own buildings, including its publicly funded facilities (such as hospitals, public housing and nursing homes). Building-construction standards will be examined and changes will be considered to the existing standards. The Province will enforce space standards with a view to reducing the footprint of government in the area of total space requirements and associated amenities. The Province will also assist other building owners to take advantage of efficiency programs and promote the most efficient heating and cooling systems.

Dieppe

The Province will:

- Continue to use sustainable building practices and measure outcomes against programs developed and accepted by the Canada Green Building Council, such as LEED (Leadership in Energy and Environmental Design); and
- Continue to retrofit existing public buildings to improve energy efficiency and water conservation.

4.4 PARTNERSHIPS

Partnerships will be sought with Crown corporations, municipalities and businesses to encourage the implementation of initiatives similar to those within the provincial government by sharing best environmental practices.

4.5 ENERGY MANAGEMENT

The Province has and will continue to demonstrate leadership in energy management and continuous improvement in energy practices to achieve maximum cost/benefit advantage from the management of its assets, on behalf of the New Brunswick citizens.

The Province will:

- Require departments to track their use of energy (including buildings and vehicles) and report to government under the Climate Change Action Plan.

5. Adapting to the Impacts of Climate Change

As important as the reduction of greenhouse gas emissions is, preparing for climate change and its effects will be of equal importance in the next few years. Climate change has already had impacts on New Brunswick communities and they are unavoidable in the immediate future, even if all nations were to drastically reduce greenhouse gas emissions immediately.

To prepare for future climate change in New Brunswick, we must implement adaptation strategies designed to manage climate change impacts that are occurring now and anticipated in the future. By attempting to understand the extent to which the climate of New Brunswick will continue to change, we are able to plan accordingly and to take appropriate action. In response to these changes, the Province has made key decisions to form strong partnerships with communities and to raise public awareness and understanding of climate change and its effects.

Incorporating climate change considerations into initiatives such as improved coastal and floodplain protection, enhanced development planning, better infrastructure standards, and the adoption of new land-management practices, will be important in growing our economy.

The Province will need to employ adaptation tools such as adopting the Government of Canada National Climate Change Adaptation Framework to raise awareness of adaptation and solutions. With such tools, the Province can facilitate and strengthen capacity for co-ordinated action on adaptation and incorporate adaptation into policy and operations. The provincial adaptation response will not only need to promote knowledge sharing networks and coordinate research on impacts and adaptation, but also have to provide methods and tools for adaptation planning in communities. This Climate Change Action Plan outlines adaptive actions in the following areas:

- Adoption of a Provincial Planning Policy;
- Strengthening measures to protect coastal areas;
- Adoption of a comprehensive water management strategy;
- Management of natural resources; and
- Risks and damages.

Beresford Beach

Wetland

5.1 PROVINCIAL PLANNING POLICY

Development in New Brunswick's rural and urban areas must be carried out with consideration of the way it will contribute and respond to the effects of climate change.

The Province is developing a provincial planning policy to guide development to appropriate locations. This policy will be an integrated initiative designed to develop statements of provincial interest, such as coastal areas protection, smart growth for settlement patterns, floodplain and drinking-water protection, and

industrial uses. It will also set out the framework for delivery and implementation at the provincial, regional and local levels necessary to protect these interests and promote sustainable communities. A provincial planning policy will organize and direct development activity with consideration of its impacts on the environment, society and the economy. Climate change predictions will be considered in land, air and water planning.

Bouctouche Dunes

The Province will:

- Develop and implement an integrated provincial planning policy.

5.2 COASTAL AREAS PROTECTION POLICY

Coastal erosion is already a challenge in several New Brunswick communities and the continuing rise in the sea level as a result of climate change will increase erosion rates. Sea levels are rising and are anticipated to increase between 50 cm and 60 cm during this century, potentially affecting many coastal communities and ecosystems, particularly when combined with more frequent storm surges. Therefore, a provincial Coastal Areas Protection Policy, currently being implemented, will be strengthened.

Grande-Anse

The Province will:

- Implement a regulatory framework to help protect the coastal environment, infrastructure and public and private property.

5.3 A COMPREHENSIVE WATER-MANAGEMENT STRATEGY

Climate change and its impacts will have an effect on our water resources, including issues related to salt water intrusion of our drinking water, and changes in the frequency of flood and drought conditions. Drinking water supplies could be affected in terms of their quantity and quality. Given water's social, environmental and economic importance, anything that compromises its availability and quality will have a marked effect on our communities and our economic competitiveness. Within this context, the potential effects of climate change represent a significant threat to New Brunswick's surface and groundwater resources that will have to be analyzed, understood, and accommodated in future public policy decisions. A water strategy will be designed to protect these resources appropriately, and ensure that New Brunswickers can continue to benefit from the province's abundance of high quality water.

The Province will:

- Develop and implement a comprehensive provincial water management strategy.

5.4 MANAGING NATURAL RESOURCES

New Brunswick is highly dependent on its natural resources. Climate change will challenge present practices in the agriculture, aquaculture, forestry and traditional fishery sectors. Both commercial management practices and traditional aboriginal hunting, fishing, harvesting and gathering activities will be influenced by such things as the decline in bountiful habitats, diseases, invasive species and new pests. Tourism in New Brunswick often promotes the province's natural heritage, and climate change will put additional pressure on our eco-based tourism products.

Agricultural operations will be subject to changes in temperature and rainfall regimes. Producers will have to continue to choose new soil and water management plans that are adapted to the changing climate. Changes to our climate could alter the amount of available agricultural land. An examination of abandoned agricultural lands and their potential for redevelopment in agriculture or for forestry resources will need to be undertaken.

Forests and their ecosystems are more vulnerable to climate change impacts since the lifecycle of trees is counted in tens or hundreds of years. A fire or disease event can devastate forests quickly and forest stands can take more than 50 years to mature, as compared to annual agricultural crops. A healthy forest provides the best opportunities for forest resources to adapt to varying temperature and precipitation regimes brought about by climate changes.

The Province will ensure that biodiversity concerns are addressed in the management of its Crown forests through the use of Sustainable Forest Management Certification within forest-management plans. In order to make better decisions on new management approaches, the Province will continue to participate in national and international discussions and with forestry and other associations to help determine significant changes in trends and assist in choosing the appropriate climate change adaptation strategies in forest management plans.

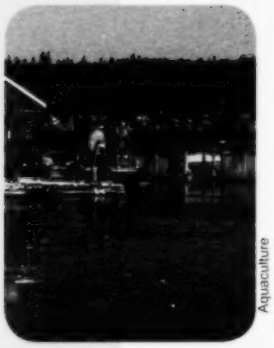
The aquaculture sector will face challenges from warming sea temperatures, freshwater availability and storm events. As with land-based activities, changes in precipitation and temperature regimes will place aquaculture activities at risk from disease and invasive marine species. Climate change adaptation strategies will need to be developed for this sector.

Much of our tourism strength lies in our natural attributes and so these must be protected. Parks are important tourism attractions and the integrity of our natural areas must be maintained. The Province will face challenges in continuing to develop our traditional suite of eco-based tourism products due to climate change impacts. For example, beach erosion at the Parlee Beach Provincial Park and Hopewell Rocks are serious concerns. Outdoor winter activities are important and adjustments to tourism strategies would be required as temperature and snow conditions continue to change. New opportunities in tourism product-development offerings are likely to emerge in the long term and the Province must position itself now to take strategic advantage of future opportunities.

Shippagan

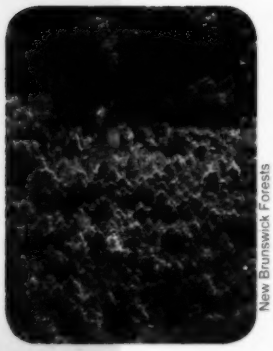
Kouchibouguac National Park

The Province will:



Aquaculture

- Undertake the necessary work to integrate climate change considerations into the forest-management plan for 2007-2012;
- Examine options for using abandoned farmland for agriculture and forestry purposes;
- Assess opportunities to enhance monitoring for, and reaction to, forest fires and forest pestilence;
- Continue to support efforts in research and monitoring to assess fisheries viability and resource risks, such as disease management in aquaculture;
- Continue to assist the tourism industry to make informed decisions and mainstream adaptation strategies as they adapt their products and services to a changing environment; and
- Adjust the Provincial Tourism Strategic Plan to accommodate climate change adaptation strategies and realign tourism product-development actions to reflect climate change impacts.



New Brunswick Forests

5.4.1 - Natural Resources and Carbon Sinks

The decomposition or growth of vegetation, known as the natural vegetation cycle, is largely considered carbon-neutral. Forest and agricultural management decisions can either add to carbon emissions or promote carbon storage, creating either carbon sinks or sources.

Vegetation, including trees, wetlands and agricultural crops, absorbs CO_2 from the atmosphere as it grows. This process converts CO_2 into organic carbon. Such processes result in growing vegetation being considered a carbon sink. Furthermore, carbon can be stored, or sequestered, when the vegetation is manufactured into consumer products.

Development decisions also have impacts on whether the Province can be considered as a net carbon sink through its management programs. Many planning authorities have already recognized the benefits of protecting green spaces, such as wetlands, in their communities.

The Province and the Atlantic Dairy and Forage Institute have established the National Greenhouse Gas Management Institute to research methods of reducing emissions and improving carbon sequestration in agricultural practices. The use of no-till/low-till practices can reduce greenhouse gas emissions as well as increase carbon sequestration.

Decisions to encourage the development of appropriate resource-management plans that ensure a net carbon sink will enable New Brunswick to take optimum advantage of our natural resources as carbon sinks, such as forest management practices and coastal and freshwater wetlands, and will help meet our greenhouse gas-reduction commitments.

Efforts continue towards increasing the understanding of the impacts and processes of resource-management activities and the Province's geology for providing opportunities for carbon sequestration and storage. Many variables must be considered and further research is needed to describe the complex underground geologic formations and their capacities to store carbon.

The Province will:

- Work with the federal government and other agencies to further assess opportunities and value for forest and agricultural sequestration as part of the development and promotion of sustainable forest programs and beneficial management practices in agriculture;
- Work with the federal government and various agencies to research opportunities for the storage of carbon through the use of underground geologic formations; and
- Encourage improved preservation and management of green spaces through the provincial planning policy initiative.

5.5 RISKS AND DAMAGES

An ongoing dialogue with the federal, local and aboriginal governments and other stakeholders is required to better understand the implications of climate change on community infrastructure, resource industries, tourism and public safety.

The Province will work with the federal government, aboriginal governments, other agencies and communities to better understand the climatic changes that are taking place. This will require new investments in environmental monitoring networks to provide the most current information on climate change impacts. The Province will work with communities, the tourism, agriculture, aquaculture, forestry, energy and transportation sectors and related professional associations to ensure informed decisions are made, as they relate to future growth and development.

In order to reduce environmental damages and reduce economic loss, it is important to transfer our scientific knowledge of how our environment is being affected by climate change to the development of applied solutions for government, businesses and communities. The Province will work to provide this knowledge and solutions for decision-makers to become informed on best practices to decrease risks.

Existing emergency management programs must enhance their capacity to forecast major weather events. Additional emergency management capacity must be put in place at the regional level to continue to assess and adapt to new threats and to continue to be vigilant for possible impacts on key infrastructure.

Anticipated climate changes will require comprehensive research, scientific knowledge and technological innovation.

The Province will:

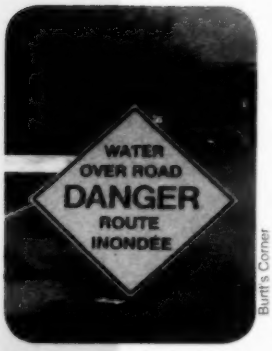
- Partner with the federal government in opportunities to undertake a provincial risk assessment initiative within New Brunswick for the purpose of identifying risks that would be mitigated with adaptation strategies, with particular attention to coastal areas and inland waters;
- Make investments in networks, programs and research that will facilitate better understanding of New Brunswick's climate change vulnerabilities;

Burt's Corner

Fredericton

- Identify adaptation solutions and use local knowledge to develop and integrate solutions to climate change impacts that provide value to New Brunswick communities and others;
- Incorporate vulnerability considerations into departmental decision-making processes involving economic, social and environmental considerations in support of the public and private sectors' development and adaptation needs; and
- Continue to work towards a fully integrated emergency management system that optimizes resources at each level for prevention, preparedness, response and recovery, and that takes climate change impacts into account.

Beresford



Burt's Corner

6. Partnerships and Communication

Our ability to manage our environment in a sustainable manner, reduce emissions and adapt to climate change impacts relies on recognition that acting to protect the environment is a shared responsibility. It is a responsibility that must be addressed by local, aboriginal, provincial and federal partnerships. The Climate Change Action Plan outlines a number of actions to strengthen these partnerships, reduce emissions and prepare for climate change impacts.

6.1 PARTNERSHIP WITH COMMUNITIES AND WORKING WITH STAKEHOLDERS

The Province acknowledges that communities will play a critical role in greenhouse gas emission reductions and adaptation strategies to address climate change impacts. The Federation of Canadian Municipalities states: *"In Canada, close to 55% of the country's greenhouse gas emissions can be influenced by decisions made by municipal governments."* Communities provide key opportunities for the reduction of greenhouse gases through land use, energy and transportation planning; infrastructure design; green procurement; building retrofits; water conservation; solid waste diversion; and the use of distributed energy systems.

The Province must actively engage municipalities and local service districts in order to provide opportunities for communities to become partners in efforts to better understand the climatic changes taking place, then mitigate and adapt to climate change by sharing ideas, experiences and practices.

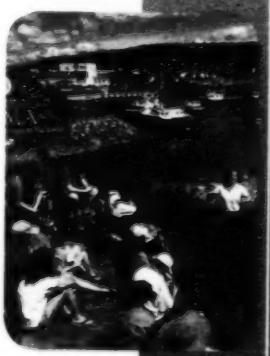
Communities provide the ability to incorporate climate change considerations in their development decisions and to implement climate-proofing actions and strategies on the ground. In many ways, they can achieve results in improved energy efficiency, cleaner air or reduced traffic congestion and provide cost savings more effectively than central governments or agencies.

Municipalities are responsible for their own community planning and zoning bylaws. These bylaws can be adopted to include climate change considerations with a view to reducing the carbon footprint of communities and moving towards a carbon-neutral development.

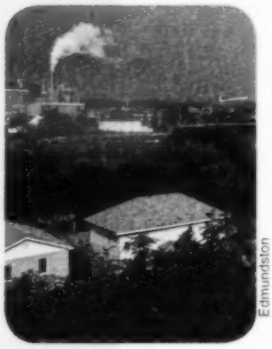
The ability for communities to generate energy from a range of green energy opportunities will need to be examined. To facilitate this, the Province will remove barriers to municipal entry into green energy generation.

To help communities to achieve their climate change goals, financial assistance will be necessary from a variety of sources to reduce planning and capital costs. Reducing these costs will in turn shorten the length of time it will take to pay for these cost-saving measures. There are many funding programs to assist communities. The Federation of Canadian Municipalities offers financial support for a range of community mitigation initiatives, including energy conservation and education. In New Brunswick, 59 of 103 municipalities are members of the federation.

Colleges and Universities



Alma



Edmundston

Schools

The Province is committed to continuing to assist communities in constructing their infrastructure in such a manner that it minimizes greenhouse gas emissions and is designed to function in a changing climate. The Province supports the participation of municipalities in green infrastructure projects.

The Province will:

- Establish a formalized roundtable process, as a provincial forum with municipal associations, to promote and encourage regular dialogue and the exchange of ideas between communities and provincial officials;
- Amend the *Municipalities Act* to remove barriers to municipal green energy generation;
- Work with communities to construct their infrastructure in such a manner that it minimizes greenhouse gas emissions, reduces energy use and is designed to function in a changing climate;
- Work with communities and planning commissions to develop effective zoning policies that take advantage of conservation design, and that adopt smart growth community-planning principles that consider climate change impacts/adaptation and emissions reductions.

6.2 PUBLIC EDUCATION AND OUTREACH

The Province recognizes that public awareness and education initiatives are essential in engaging people in making choices that both reduce greenhouse gas emissions and respect the challenges of a changing environment. Stakeholders have clearly stated that there must be clear accountability through measuring and reporting processes.

Community officials and provincial authorities can assist in adapting to climate change by sharing both information on issues of mutual interest and practices that work best. Communities are also well positioned to inform residents about energy efficiency, emissions reductions and adaptation practices. In implementing its leading-by-example actions outlined in this plan, the Province will share its experiences with communities.

Provincial parks are another way for the Province to deliver climate change education and awareness programs, as many New Brunswickers take advantage of these parks. Provincial interaction with the tourism industry can be used to facilitate communication and provide best practices to manage climate change within the industry. Climate change considerations will be included in enhanced Tourism Development Guidelines now under review by the Province. Examples might include the promotion of energy-efficient developments; improvements to water and waste water management; and the identification of impacts of climate change on the tourism industry.

The Province will encourage all New Brunswick residents and businesses to consider their current actions and to take action towards both reducing their greenhouse gas emissions in all aspects of their daily lives and adapting to future climate change impacts. Activities will be held to promote active transportation to work, waste reduction and diversion, and energy efficiency.

The Province will increase public awareness and understanding of climate change issues and work with other partners, such as Efficiency NB, the NB Climate Hub, the Conservation Council of New Brunswick and provincial municipal associations to develop awareness and educational programs that support the Climate Change Action Plan. These programs will serve to inform the public of the possible impacts of climate change, the steps necessary to reduce greenhouse gas emissions, and measures necessary to adapt to changes already taking place.

The Province will:

- Support the development of community-based public awareness and education initiatives that will engage New Brunswick residents in taking action to reduce emissions;
- Share its experience from greening-of-government efforts in energy management with communities in order to support and expand the use of successful practices at all levels.

Grand Manan

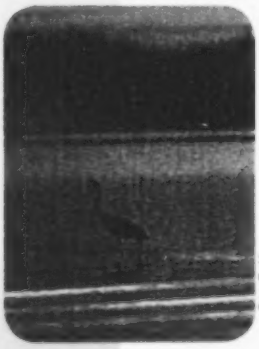
St. George

7. Moving Forward

Miramichi River

7.1 IMPLEMENTATION

Partnerships and resources are required to implement this Climate Change Action Plan. Through the support of initiatives such as Efficiency NB, the Province's Renewable Portfolio Standard, Environmental Trust Fund, and greening-of-government efforts, substantial gains will be made towards reducing provincial greenhouse gas emissions. It will also be essential for the Province to work with the federal government to achieve the Climate Change Action Plan commitments.



Cap-Pelé

Programs such as the recently announced Eco-Trust, the Canada/NB Infrastructure Program and the Canada/NB Municipal Rural Infrastructure Program are also essential and can assist in achieving the Action Plan commitments. The most recent (2007) federal budget also included a number of other initiatives that could be explored as funding opportunities for some action plan elements.

In working with the federal government, the Province will encourage it to ensure that First Nations have access to comparable programs.

Although the actions contained in this document will be phased in and implemented within the timeline of this plan, additional actions, including those addressing adaptation issues, are long-term and will require a sustained commitment beyond the 2007-2012 period.

7.2 ACCOUNTABILITY

7.2.1 - Climate Change Secretariat

A Climate Change Secretariat has been created within the Department of Environment to help co-ordinate activities of government departments, and to develop and implement initiatives for achieving the objective of the Climate Change Action Plan and raise awareness of climate change issues.

The secretariat will also contribute to the NEG/ECP climate change activities and support the Province in any bilateral (federal, provincial, territorial, or international) discussions on climate change matters.

The secretariat will track and report on greenhouse gas emissions trends and progress regarding the implementation of all climate change initiatives in this action plan.

New Brunswick Climate Change Secretariat
Department of Environment

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Climate Change